

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

**AIR QUALITY PERMIT
Issued under 401 KAR 52:040**

Permittee Name: International Catalyst Technologies, Inc.

Mailing Address: 5090 Gilbertsville Highway
Calvert City, KY 42029

Source Name: International Catalyst Technologies, Inc.
Mailing Address: 5090 Gilbertsville, Highway
Calvert City, KY 42029


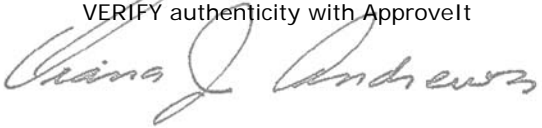
Source Location: Same as Above

Permit Number: S-05-114
Source A. I. #: 34469
Activity #: APE20040002
Review Type: Minor Source Operating/Construction
Source ID #: 21-157-00058

Regional Office: Paducah Regional Office
130 Eagle Nest Drive
Paducah, KY 42003-9435

County: Marshall

Application
Complete Date: July 8, 2002
Issuance Date: February 20, 2006
Revision Date: NA
Expiration Date: February 20, 2016

E-Signed by Diana Andrews
VERIFY authenticity with ApproveIt 


**John S. Lyons, Director
Division for Air Quality**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission Units 04, 05, 06, and 09

Description: Emission Unit 04 (04), 9-Zone Drying/Calciners/Cooling
Zone 1, 2, and 3 - Drying ovens (0.125 tons prod/hr)
Fuel: Natural gas
Controls: DeNO_x Unit (controls for NO_x and combustion emission 3600 ft³ of nat. gas/hr). *Only used when calciner 3030 is in operation
Baghouse 3040 and Scrubber 3050 particulate control from flash calciner.
Installation Date: 1992 (catalyst manufacturing process) and 2000 (flash calciner process)

Description: Emission Unit 05 (05), Monolith Coating
Maximum Operating Rate: 0.125 tons produced/hr
Controls: none
Installation Date: 1992

Description: Emission Unit 06 (06), Mixing and Milling
Maximum Operating Rate: 0.125 tons produced/hr
Controls: Main ICT Baghouse 9511
Installation Date 1992

Description: Emission Unit 09 (09), Alumina Loading/Handling Weigh Hopper
Maximum Operating Rate: 0.125 tons produced/hr
Controls: Main ICT Baghouse 2232
Installation Date: 1992

APPLICABLE REGULATIONS: 401 KAR 59:010 *New Process Operations* constructed after July 2, 1975.

REGULATIONS NOT APPLICABLE:

Emissions of nitrogen oxides (NO_x) from the facility will have no applicable requirements since uncontrolled NO_x emissions are less than 250 TPY, 401 KAR 51:017, Prevention of Significant Deterioration (PSD) will not be applicable. The source is not applicable to any 40 CFR 63 subparts. No MACT regulations exist for the processes identified in the permit application.

No indirect heat exchangers are in operation at the source, hence 401 KAR 59:015 is not applicable.

Federal regulation 40 CFR 60, Subpart Kb is not applicable to the storage or processing tanks due to the size or material storage.

Pursuant to 401 KAR 63:060, Section 2, acetic acid is not a hazardous air pollutant. Based on emission calculations for each acetic acid tank listed under Section D, emissions are insignificant.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**1. Operating Limitations:**

None.

2. Emission Limitations:

- a. Pursuant to 401 KAR 59:010, Section 3(2), particulate matter (PT) emissions from a control device or stack shall not exceed 2.34 lbs/hr.
- b. Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis.

Compliance Demonstration Method:

- a. Compliance with the particulate matter limitation will be demonstrated from the following emission calculation basis and monitoring requirements:
PT emission in pounds per hour = (monthly processing rate in tons/month)(1 month/hours of operation that month)(emission factor 1b PT/ton)(1-control efficiency).

See 4, Monitoring Requirements for monitoring rates and visual inspection of controls.

- b. For compliance with the opacity limitation, refer to 4, Monitoring Requirements and 5, Recordkeeping Requirements, below.

3. Testing Requirements:

None

4. Monitoring Requirements:

The permittee shall monitor the following parameters:

- a. Differential pressure of the following filters on a weekly basis when affected equipment is in operation.

Filter	Emission Unit
3040	04
9511	06
2232	09

- b. Monthly throughput of nitrogen-containing salts to the process units.
- c. Monthly natural gas usage rate.
- d. The permittee shall perform a qualitative visible observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observation. If visible emissions from a stack are seen, then the opacity shall be determined by EPA Reference Method 9 and an inspection shall be initiated for any necessary repairs.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Recordkeeping Requirements:

The permittee shall maintain records of items monitored, as listed above in 4, Monitoring Requirements. The opacity determined by Reference Method 9, if any were taken, and repairs that were made due to an opacity reading which exceeded the standard shall also be recorded.

6. Reporting Requirements:

None

SECTION C - GENERAL CONDITIONS

A. Administrative Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
2. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
3. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Material incorporated by reference by 401 KAR 52:040, Section 1a, 11].
4. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Material incorporated by reference by 401 KAR 52:040, Section 1a, 4,5].
5. This permit does not convey property rights or exclusive privileges [Material incorporated by reference by 401 KAR 52:040, Section 1a, 8].
6. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].

SECTION C - GENERAL CONDITIONS (CONTINUED)

B. Recordkeeping Requirements

1. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f)].
2. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

C. Reporting Requirements

1.
 - a. In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
 - b. The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition 1. a. above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Material incorporated by reference by 401 KAR 52:040, Section 5, 3].
2. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Material incorporated by reference by 401 KAR 52:040, Section 1a, 6].
3. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

SECTION C - GENERAL CONDITIONS (CONTINUED)

D. Inspections

1. In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
 - b. To access and copy any records required by the permit.
 - c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
 - d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

E. Emergencies/Enforcement Provisions

1. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Material incorporated by reference by 401 KAR 52:040, Section 1a, 3].
2. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
3. Emergency provisions listed in General Condition E.2 are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].
4. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

SECTION C - GENERAL CONDITIONS (CONTINUED)**F. Compliance**

1. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
 - a. Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - b. All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device.
 - c. A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
2. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period, and
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Paducah Regional Office
130 Eagle Nest Drive
Paducah, KY 42003-9435

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601-1403

SECTION C - GENERAL CONDITIONS (CONTINUED)

3. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
 - (a) Applicable requirements that are included and specifically identified in this permit; or
 - (b) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

SECTION D - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. While these activities are designated as insignificant the permittee shall comply with the applicable regulation and any level of periodic monitoring specified below.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. 1,500 gallon Acetic Acid Bulk Storage Tank	None
2. Tank ID # 2270, volume 68 gals	None
3. Tank ID # 2280, volume 68 gals	None
4. Tank ID # 2119, volume 186 gals	None
5. Tank ID # 2252, volume 1165 gals	None
6. Tank ID # 2101, volume 1165 gals	None
7. Tank ID # 2115, volume 1165 gals	None
8. Tank ID # 2117, volume 1165 gals	None
9. Tank ID # 2264, volume 1165 gals	None
10. Tank ID # 2266, volume 1165 gals	None
11. Tank ID # 2250 & 2260, volume 475 gals, each	None
12. Tank ID # 2262, volume 475 gals	None
13. Tank ID # 2273, volume 668 gals	None
14. Tank ID # 2283, volume 668 gals	None
15. Ammonia/water storage tank	None
16. Pipeline equipment in ammonia service	None
17. Pipeline equipment in acetic acid service	None
18. Fire Box for DeNOx unit(combustion)	None
19. Tank ID # 2236, Volume 668 Gallons EP# 10 on EIS	None
20. Tank ID # 2122, Volume 25 Gallons EP# 10 on EIS	None
21. Tank ID # 2235, Volume 25 Gallons EP# 10 on EIS	None
22. 30 gallon HCL Mixing Vessel for DI Water	None
23. 30 gallon NaOH Mixing Vessel for DI Water Unit	None
24. Nine 3600 Liter storage/mixing tanks ID # 2101, 2250, 2252, 2115, 2117, 2260, 2262, 2264, and 2266	None
25. One 300 Liter adsorption tank, ID # 2237	None
26. Twenty Eight Portable Mixing Tanks, Nineteen 400 liter Tanks, and Nine 200 Liter Tanks. <u>400 Liter Tank Identification numbers:</u> 2511, 2323, 2331, 2513, 4341, 2124, 4337, 4339, 2327, 2335, 4343, 2325, 2509, 2333, 2275, 2277, 2329, 2515, and 2216 <u>200 Liter Tank Identification numbers:</u> 1911, 1915, 1901, 1909, 1907, 1917, 1913, 1905, and 1903	None

These tanks are used to store rinse water created from cleaning lines and equipment throughout the ICT facility. This rinse water is held in these vessels until it can be reprocessed as make up water.